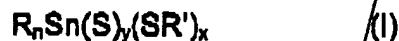


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Sub.
- (a) a metal containing stabilizer of formula I



in which,

R represents an alkyl group

SR' represents a mercaptide ligand

n = 1 or 2

x = greater than 0 to 3, and

x+2y = 4-n; and

- (b) a mercapto alkanol ester of a carboxylic acid providing a source of mercaptan exceeding that required to saturate the Sn component of said metal containing stabilizer,

wherein said metal containing stabilizer and said mercapto alkanol ester are present in an amount effective to stabilize a vinyl halide resin against heat and/or light.

325. The composition of claim 324, wherein said mercaptide ligand is a derivative of a carboxylic acid, a polycarboxylic acid, a mercaptan, a mercaptoacid, a mercaptoalcohol, a mercaptoacid ester, or a mercaptoalcohol ester.

326. The composition of claim 325, wherein said mercaptide ligand is an ester of mercaptocarboxylic acid, a 2-mercaptoalkanol ester of a carboxylic acid, a 2-mercaptoalkanol, an alkyl thiol, or an aromatic thiol.

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cont.

327. The composition of claim 324, wherein the mercapto alkanol ester of a carboxylic acid has the formula:



where R is a linear or branched alkyl or alkenyl, aryl or aralkyl; and

R' represents a C₂ to C₁₈ alkylene.

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328. The composition of claim 327, where R contains 6 to 38 carbon atoms.

329. The composition of claim 327, where R contains 8 to 18 carbon atoms.

330. The composition of claim 327, wherein R contains 1 to 8 carbon atoms.

331. The composition of claim 327, where the carboxylic acid is at least one chosen from caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, 2-ethylhexanoic, neodecanoic, oleic, linoleic, and mixtures thereof.

332. The composition of claim 327, wherein the mercapto alkanol ester of a carboxylic acid is at least one chosen from mercapto ethyl stearate, 3-thio-glycerol myristate, mercapto ethyl palmitate, mercaptoethyl oleate, and mercapto ethyl myristate.

333. The composition of claim 327, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.01 % wt. to 5 % wt.

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334. The composition of claim 327, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.1 % wt. to 1.0 % wt. of the vinyl halide resin.

335. The composition of claim 324, wherein the vinyl halide resin is polyvinyl chloride.

336. A composition comprising:

(a) a metal containing stabilizer of formula II



in which,

R represents an alkyl group

SR' represents a mercaptide

n = 1 or 2, and

x = 4-n; and

(b) a mercapto alkanol ester of a carboxylic acid providing a source of mercaptan exceeding that required to saturate the Sn component of said metal containing stabilizer,

wherein said metal containing stabilizer and said mercapto alkanol ester are present in an amount effective to stabilize a vinyl halide resin against heat and/or light.

337. The composition of claim 336, wherein said mercaptide ligand is a derivative of a carboxylic acid, a polycarboxylic acid, a mercaptan, a mercaptoacid, a mercaptoalcohol, a mercaptoacid ester, or a mercaptoalcohol ester.

338. The composition of claim 337, wherein said mercaptide ligand is an ester of mercaptocarboxylic acid, a 2-mercaptoalkanol ester of a carboxylic acid, a 2-mercaptoalkanol, an alkyl thiol, or an aromatic thiol.

339. The composition of claim 336, wherein the mercapto alkanol ester of a carboxylic acid has the formula:



where R is a linear or branched alkyl or alkenyl, aryl or aralkyl; and
R' represents a C₂ to C₁₈ alkylene.

340. The composition of claim 339, where R contains 6 to 38 carbon atoms.

341. The composition of claim 339, where R contains 8 to 18 carbon atoms.

342. The composition of claim 339, wherein R contains 1 to 8 carbon atoms.

343. The composition of claim 339, where the carboxylic acid is at least one chosen from caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, 2-ethylhexanoic, neodecanoic, oleic, linoleic, and mixtures thereof.

344. The composition of claim 339, wherein the mercapto alkanol ester of a monocarboxylic acid is at least one chosen from mercapto ethyl stearate, 3-thio-glycerol myristate, mercapto ethyl palmitate, mercaptoethyl oleate, and mercapto ethyl myristate

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345. The composition of claim 339, wherein the mercapto alkanol ester of a monocarboxylic acid is present in the range of 0.01 % wt. to 5 % wt. of the vinyl halide resin.

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346. The composition of claim 339, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.1 % wt. to 1.0 % wt. of the vinyl halide resin.

347. The composition of claim 336, wherein the vinyl halide resin is polyvinyl chloride.

348. The composition comprising:

(a) a mono- or dialkyltin bis(mercapto alkanol ester of a carboxylic acid) compound wherein the alkyl is a C₁ to C₈ alkyl; and

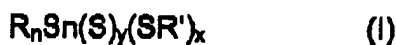
(b) a mercapto alkanol ester of a carboxylic acid providing a source of mercaptan exceeding that required to saturate the Sn component of said metal containing stabilizer,

wherein said (a) and (b) components are present in an amount effective to stabilize a vinyl halide resin against heat and/or light.

349. A method of stabilizing a vinyl halide resin comprising the steps of:

adding to the vinyl halide resin, in an amount effective to stabilize the vinyl halide resin against heat and/or light,

(a) a metal containing stabilizer corresponding to formula I



in which,

R represents an alkyl group

SR' represents a mercaptide ligand

n = 1 or 2

x = greater than 0-3, and

x+2y = 4-n; and

(b) a mercapto alkanol ester of a carboxylic acid providing a source of mercaptan exceeding that required to saturate the Sn component of said metal containing stabilizer.

350. The method of claim 349, wherein said mercaptide ligand is a derivative of a carboxylic acid, a polycarboxylic acid, a mercaptan, a mercaptoacid, a mercaptoalcohol, a mercaptoacid ester, or a mercaptoalcohol ester.

351. The method of claim 349, wherein said mercaptide ligand is an ester of mercaptocarboxylic acid, a 2-mercaptoalkanol ester of a carboxylic acid, a 2-mercaptoalkanol, an alkyl thiol, or an aromatic thiol.

352. The method of claim 349, wherein the mercapto alkanol ester of a carboxylic acid has the formula:



where R is a linear or branched alkyl or alkenyl, aryl or aralkyl; and

R' represents a C₂ to C₁₈ alkylene.

353. The method of claim 349, where the carboxylic acid is at least one chosen from caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, 2-ethylhexanoic, neodecanoic, oleic, linoleic, and mixtures thereof.

354. The method of claim 349, wherein the mercapto alkanol ester of a carboxylic acid is at least one chosen from mercapto ethyl stearate, 3-thio-glyceryl myristate, mercapto ethyl palmitate, mercaptoethyl oleate, and mercapto ethyl myristate.

355. The method of claim 349, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.01 % wt. to 5.0 % wt.

356. The method of claim 349, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.1 % wt. to 1.0 % wt. of the vinyl halide resin.

357. The method of claim 349, wherein the vinyl halide resin is polyvinyl chloride.

358. A method of stabilizing a vinyl halide resin comprising the steps of:
adding to the vinyl halide resin, in an amount effective to stabilize the vinyl halide resin against heat and/or light,

(a) a metal containing stabilizer of formula II



in which,

R represents an alkyl group

SR' represents a mercaptide ligand

n = 1 or 2, and

x = 4-n; and

(b) a mercapto alkanol ester of a carboxylic acid providing a source of mercaptan exceeding that required to saturate the Sn component of said metal containing stabilizer.

359. The method of claim 358, wherein said mercaptide ligand is a derivative of a carboxylic acid, a polycarboxylic acid, a mercaptan, a mercaptoacid, a mercaptoalcohol, a mercaptoacid ester, or a mercaptoalcohol ester.

360. The method of claim 358, wherein said mercaptide ligand is an ester of mercaptocarboxylic acid, a 2-mercaptoalkanol ester of a carboxylic acid, a 2-mercaptoalkanol, an alkyl thiol, or an aromatic thiol.

361. The method of claim 358, wherein the mercapto alkanol ester of a monocarboxylic acid has the formula:



where R is a linear or branched alkyl or alkenyl, aryl or aralkyl; and

R' represents a C₂ to C₁₈ alkylene.

362. The method of claim 358, where the carboxylic acid is at least one chosen from caprylic, pelargonic, capric, undecanoic, lauric, myristic, palmitic, stearic, isostearic, 2-ethylhexanoic, neodecanoic, oleic, linoleic, and mixtures thereof.

363. The method of claim 358, wherein the mercapto alkanol ester of a carboxylic acid is at least one chosen from mercapto ethyl stearate, 3-thio-glycerol myristate, mercapto ethyl palmitate, mercaptoethyl oleate, and mercapto ethyl myristate

364. The method of claim 358, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.01 % wt. to 5 % wt. of the vinyl halide resin.

365. The method of claim 358, wherein the mercapto alkanol ester of a carboxylic acid is present in the range of 0.1 % wt. to 1.0 % wt. of the vinyl halide resin.

366. The method of claim 358, wherein the vinyl halide resin is polyvinyl chloride.

REMARKS

I. Status of the Claims

By this amendment, Applicants have canceled claims 176-323, and added new claims 324-366. Thus, claims 324-366 are currently pending. Support for this amendment can be found in the original specification and claims, as filed. For example, support for the metal containing stabilizer now represented as formulas I and II, as well as support for the mercaptide ligands now claimed can be found in the specification at pages 14-18. In addition, support for the limitation to the components (a) and (b) being